

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

292.9
So3Fe

WATER SUPPLY OUTLOOK FOR WASHINGTON



U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

AS OF
JUNE 1, 1974

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*Cover Photo: Snow Surveyors near Ship Creek,
Alaska snow course.*

PHOTO A-772-11

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR WASHINGTON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D C.



Released by

GALEN S. BRIDGE
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

In Cooperation with

JOHN A. BIGGS
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON



Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor
SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

WATER SUPPLY OUTLOOK

State of Washington
June 1, 1974

*** * * * *
*** * * * *
*** Cold wet weather has continued throughout most of the month ***
*** over the State of Washington and there is still plenty of ***
*** snow at the higher elevations. The flood danger is decreasing ***
*** slightly as more and more of the lower elevation snowpacks ***
*** melt out and the weather continues cool, but the above ***
*** normal rainfall that we experienced over parts of the state ***
*** and tributary basins have tended to offset this cool weather. ***
*** We can all be thankful that we didn't have both above normal ***
*** temperature and precipitation during May, because warm rain ***
*** on the ripe snowpacks would surely have produced floods. We ***
*** can still expect high flows on most of our unregulated ***
*** streams and the stage forecasts released last month by the ***
*** River Forecast Center are still expected to occur. When the ***
*** rivers will peak out is still speculative because we don't ***
*** have enough information on temperatures and rate of snow pack ***
*** depletion in the water producing areas, but hopefully, this ***
*** will start to change with installations of SNOTEL data ***
*** telemetry sites over the next several years. Our forecasts ***
*** of volume outflow are not being changed from that released ***
*** last month. Outflow during April was generally near normal ***
*** from most areas, with only a few streams reporting flows 50 to ***
*** 100 percent above average and these are in the Southeastern ***
*** portion of the state. ***
*** * * * * *
*** * * * * *

SNOW COVER

There are not too many snow courses, in Washington, that are measured on either May 15 or June 1, but those that are, as well as those in the tributary areas of British Columbia, Idaho, and Montana are at record or near record highs. Some snow courses, at the higher elevations, actually increased in water equivalent through June 1. This is practically unheard of in this area. Comparison of snow courses with past normal records gives percent figures way out of reason, but 1972 was also a good year, so comparison with that year does show that the higher elevation snow packs are greater this year; Yakima - 156 percent of 1972 and 254 percent of normal, Okanogan - 154 percent of 1972 and 354 percent of average, Kettle - 173 percent of 1972 and 312 percent of average, Wenatchee - 108 percent of 1972 and 192 percent of normal.

RESERVOIRS

All major reservoirs are being managed for flood control purposes and so current capacities have little meaning. They are all expected to fill on schedule. The Bureau of Reclamation reports that Franklin D. Roosevelt Reservoir will fill early in July and the five Yakima reservoirs will fill during the last half of June.

STREAMFLOW

During May, streamflow varied from a low of 11 percent below normal for the Chelan River to a high of 94 percent above normal for the Walla Walla. If the drainage area for a stream is generally from the higher elevations, the flow was low; if from a lower elevation watershed, the flow was high.

PRECIPITATION

In direct contrast to streamflow, the rainfall in the Southeastern portion of the state was 26 percent below normal during May. All other drainage divisions, as reported by the National Weather Service, had above normal valley rainfall. This ranged from 3 percent above for the Columbia in Canada to 42 percent above for the Southwest slopes of the Cascades.

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE <u>1/</u> CAPACITY	Measured (June)			
			1974	1973	1972	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	397.7	218.9	467.2	299.8
Columbia	Franklin D. Roosevelt Lake	5232.0	979.0	1808.5	1722.0	3239.1
Columbia	Banks Lake	761.8	204.9	112.2	381.3	446.7
Okanogan	Conconully Reservoir	13.0	11.5	10.4	12.1	10.4
Okanogan	Salmon Lake	10.5	10.5	10.1	10.5	9.3
Chelan	Lake Chelan	676.1	390.0	436.7	481.3	481.4
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	114.1	122.9	138.2	147.5
Kachess	Kachess Lake	239.0	196.8	173.1	209.8	226.2
Cle Elum	Lake Cle Elum	436.9	301.5	337.2	319.1	387.3
Bumping	Bumping Lake	33.7	16.6	27.8	31.0	27.7
Tieton	Rimrock Lake	198.0	148.4	131.8	129.3	172.0
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1202.0	808.8	1056.3	1315.6	708.6
Skagit	Diablo Reservoir	90.6	86.8	87.9	88.9	84.8
Skagit	Gorge Reservoir	9.8	8.9	8.1	8.7	-

1/ Based on Active Storage

* 15-Year Average 1958-72

PRECIPITATION 1/

Division Averages and Departures

Drainage Divisions	FALL		WINTER		SPRING	
	Sept-Oct Observed	1973 <u>2/</u> Departure	Nov.-1973-- Observed	Mar.-1974 Departure	April-May 1974 <u>2/</u> Observed	Departure
Columbia in Canada	5.14	+ 0.67	15.91	+ 3.16	3.68	+ 0.45
Pend Oreille - Spokane	4.28	- 0.20	32.17	+13.42	4.90	+ 0.49
Northeastern Washington	3.36	- 0.58	17.93	+ 6.82	3.27	+ 0.01
Southeastern Washington	3.71	+ 0.48	20.99	+ 7.52	4.55	+ 0.89
Central Washington	4.68	- 0.07	36.60	+ 9.07	4.16	+ 0.85
North Central Washington	3.44	+ 1.82	9.48	+ 2.76	2.22	+ 0.33
Northwest Slope Cascades	11.53	- 1.16	71.63	+19.40	10.90	+ 0.78
Southwest Slope Cascades	9.69	+ 1.01	57.29	+15.65	9.54	+ 2.24
Northeastern Washington	- Lower Spokane, Colville, Sanpoil and Lower Kettle Drainages.					
Southeastern Washington	- Touchet, Tucannon and Palouse Drainages.					
Central Washington	- Yakima, Wenatchee and Chelan Drainages.					
North Central Washington	- Methow and Okanogan Drainages.					
Northwest Slope Cascades	- Puget Sound Drainages.					
Southwest Slope Cascades	- Lower Columbia Drainages.					

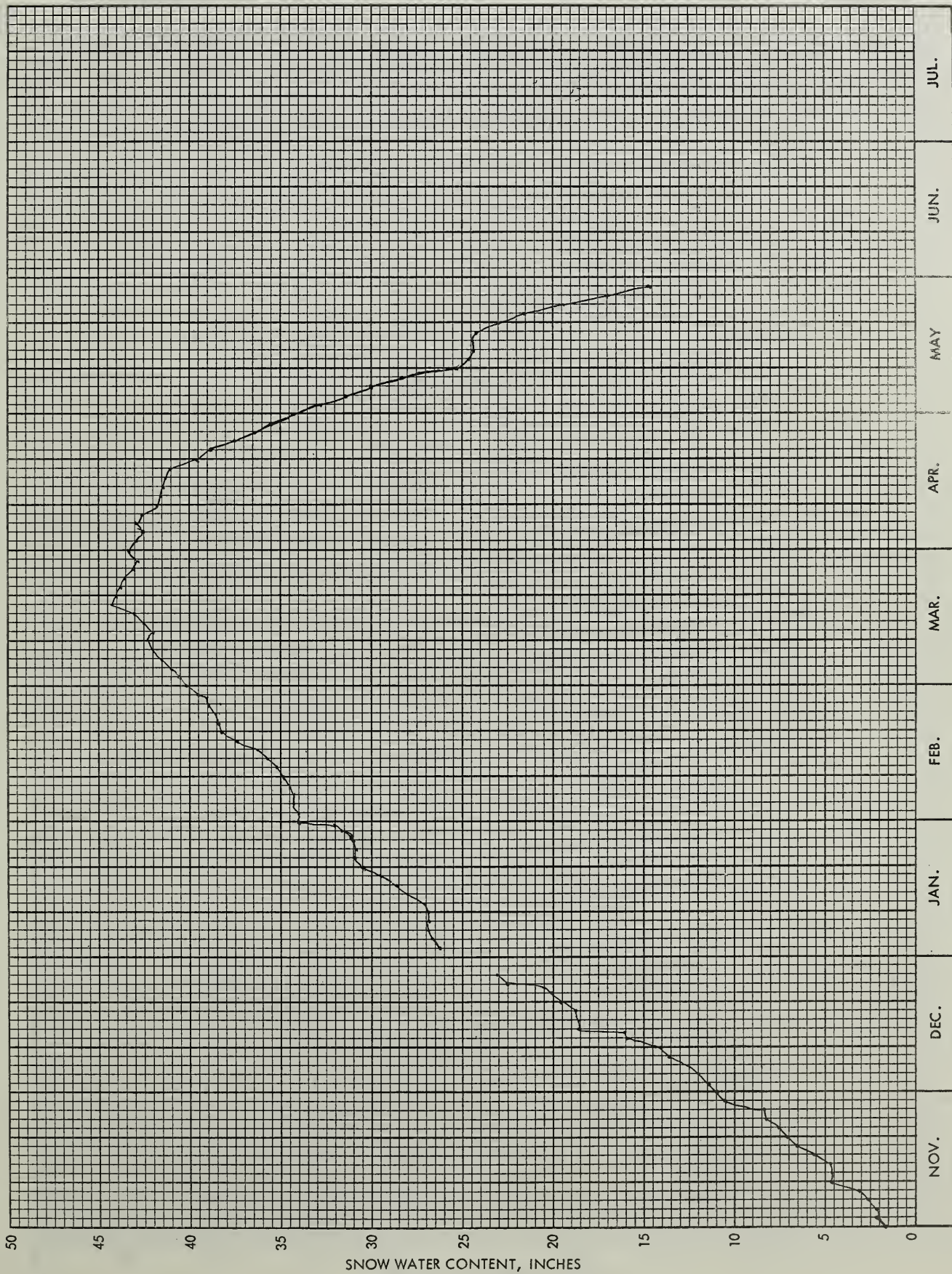
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorological Services of Canada and the National Weather Service

2/ - Departure from 15-year (1958-72) drainage division average.

BERNE-MILL CREEK
SNOW PILLOW DATA

AS OF JUNE 1, 1974

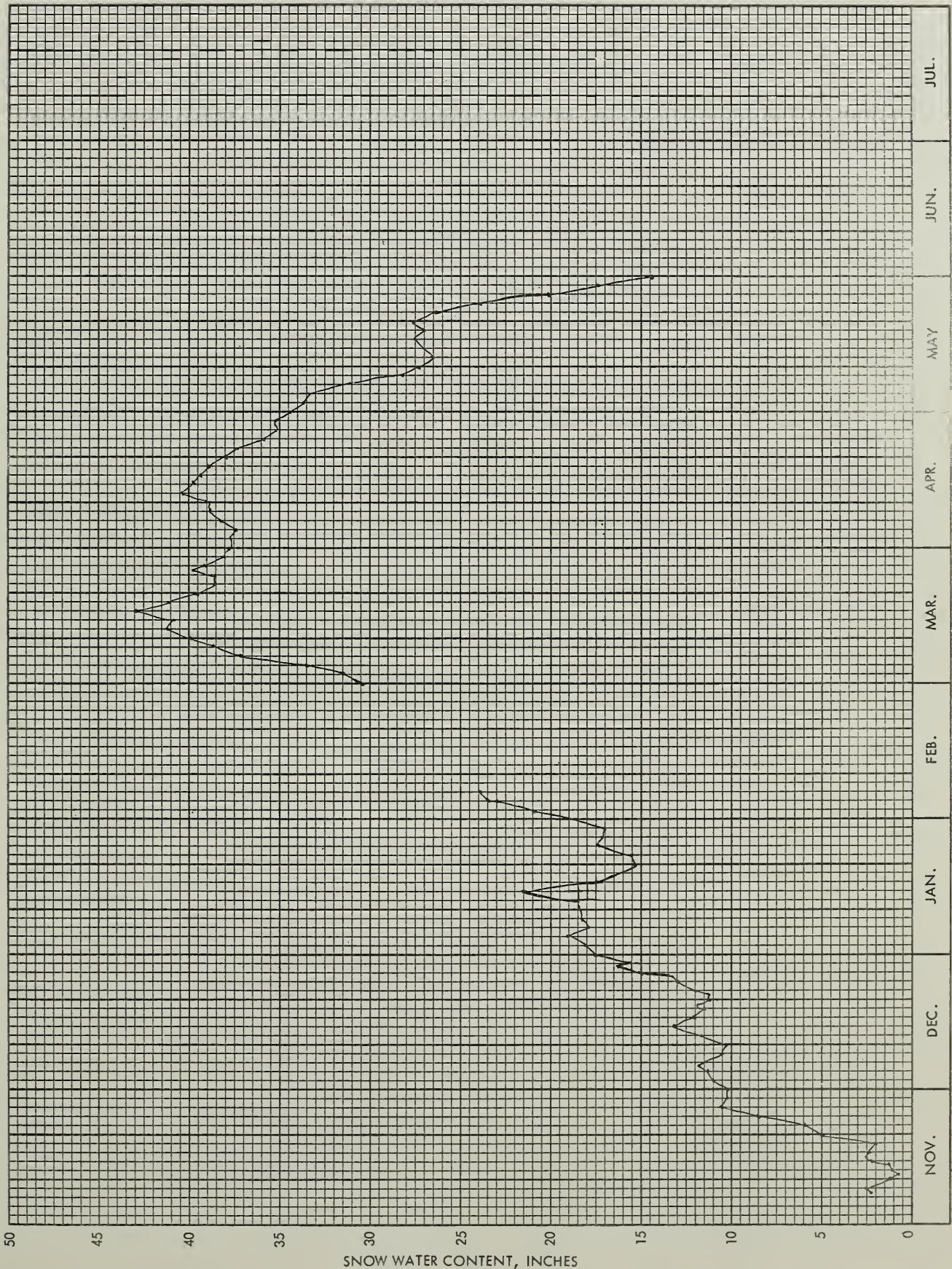
Sec. 13 T. 26N R. 14E No. 21B41SP Drainage: Wenatchee River
Lat. 47° 45' Long. 121° 42' Elev. 3240'



COUGAR MOUNTAIN - FS
SNOW PILLOW DATA

JUNE 1, 1974

Sec. 21 T. 21N R. 9E No. 21B42SP Drainage: Green River
Lat. 47° 17' Long. 120° 40' Elev. 3200'

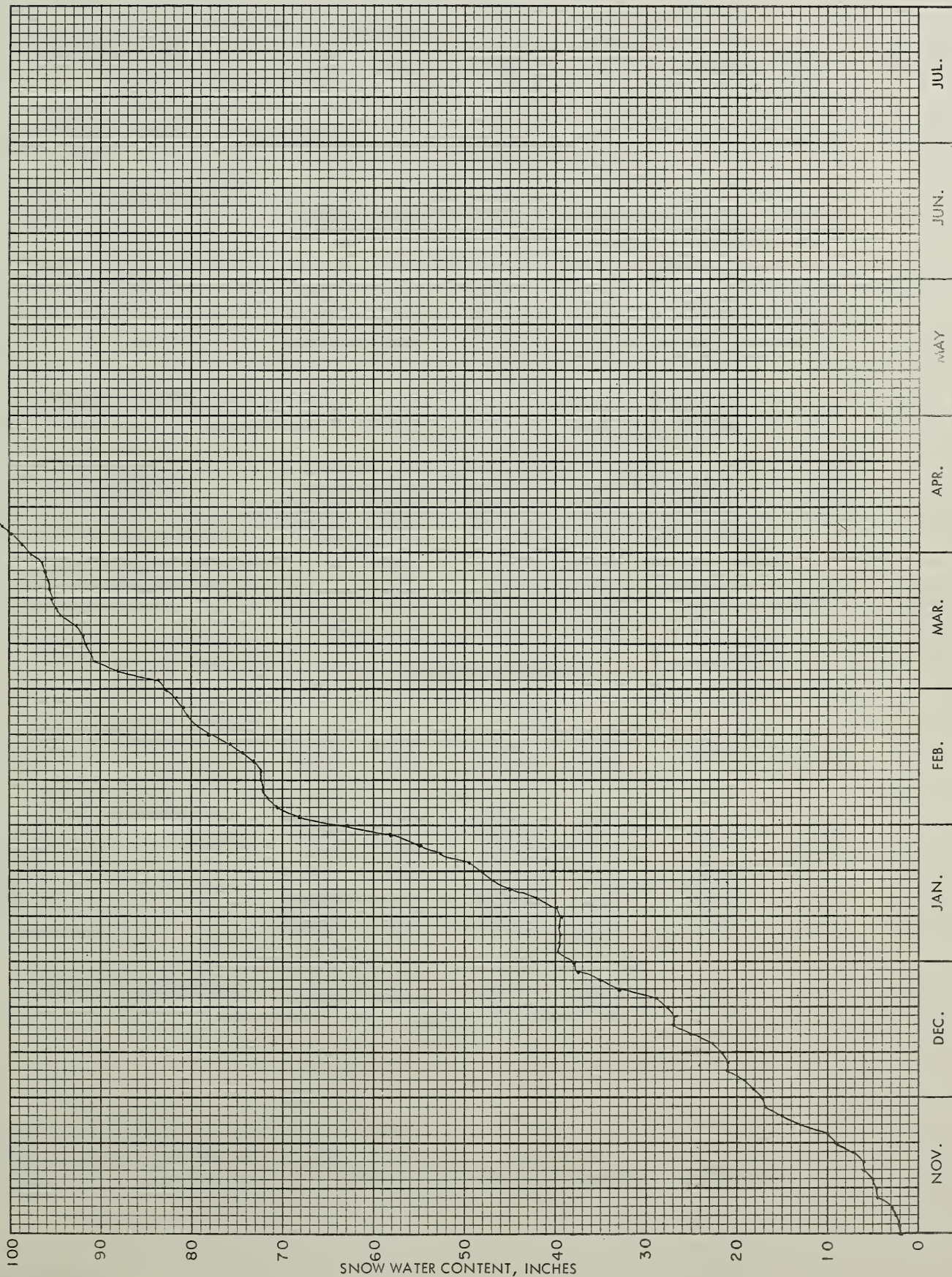


SNOWSHOE BUTTE - FS

SNOW PILLOW DATA

AS OF JUNE 1, 1974

Sec. 28 T. 21N R. 9E No. 21B43SP Drainage: Green River
Lat. 47° 13' Long. 121° 22' Elev. 5000'



APPENDIX 1
CORRECTIONS AND ADDITIONS - 1974 SNOW REPORTS

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average [#]

February 1

<u>KETTLE RIVER</u>							
Old Glory Mountain	42-Can	7000	1/27	97	<u>34.2</u>	19.5	19.0*
<u>OKANOGAN RIVER</u>							
Isontok Lake	152-Can	5510	1/26	<u>34</u>	8.7	4.0	6.2*
<u>CHELAN LAKE BASIN</u>							
Cloudy Pass +	20A22a	6500	2/5	<u>136</u>	<u>43.5</u>	22.2	29.0
<u>YAKIMA RIVER</u>							
Ollallie Meadows	21B02	3625	2/6	<u>167</u>	<u>65.1</u>	14.6	32.7
Van Epps Pass +	20B26a	5925	2/7	<u>170</u>	<u>51.0</u>	19.2	-
Waptus Lake +	21B49a	3024	2/7	<u>123</u>	<u>36.9</u>	15.8	-
<u>COWLITZ RIVER</u>							
Potato Hill	21C14	4500	2/5	<u>110</u>	<u>34.6</u>	11.5	23.7
<u>GREEN RIVER</u>							
Cougar Mountain	21B42SP	3200	2/6	<u>69</u>	24.6	6.2	-
Snowshoe Butte	21B43SP	5000	2/6	<u>176</u>	<u>72.0</u>	<u>27.2</u>	-
<u>BAKER RIVER</u>							
Watson Lakes	21A08A	4500	<u>2/5</u>	<u>192</u>	<u>77.0</u>	<u>37.0</u>	<u>42.9</u>

March 1

<u>PEND OREILLE RIVER</u>							
Lookout	15B02	5250	2/26	130	43.7	<u>17.8</u>	32.7
<u>SPOKANE RIVER</u>							
Above Burke	15B08	4100	2/26	91	27.0	<u>8.6</u>	-
Copper Ridge	16B02	4800	2/28	125	45.1	<u>11.1</u>	25.7
Lookout	15B02	5250	2/26	130	43.7	<u>17.8</u>	32.7
Lower Sands Creek	16B01	3400	2/26	84	26.8	<u>7.4</u>	17.5
Roland Summit	15B05A	5200	3/7	166	54.1	<u>22.4</u>	31.3
<u>CHELAN LAKE BASIN</u>							
Little Meadows +	20A24a	5275	3/2	<u>156</u>	<u>56.2</u>	32.6	39.9

Average based on 1958-72 average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 2
CORRECTIONS AND ADDITIONS - 1974 SNOW REPORTS

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average $\frac{1}{2}$

March 1 (Cont.)

YAKIMA RIVER

Bumping Lake	21C08	3450	3/1	79	<u>26.0</u>	7.7	15.3
Corral Pass	21B13	6000	3/7	<u>156</u>	<u>52.0</u>	22.2	34.5
Olallie Meadows	21B02	3625	3/7	<u>214</u>	<u>81.8</u>	15.0	40.6

WHITE RIVER

Corral Pass	21B13	6000	3/7	<u>156</u>	52.0	22.2	34.5
-------------	-------	------	-----	------------	------	------	------

GREEN RIVER

Snowshoe Butte SP	21B43SP	5000	3/7	222	<u>88.8</u>	29.0	-
-------------------	---------	------	-----	-----	-------------	------	---

SNOQUALMIE RIVER

Olallie Meadows	21B02	3625	3/7	214	<u>81.8</u>	15.0	40.6
-----------------	-------	------	-----	-----	-------------	------	------

SKAGIT RIVER

Beaver Creek Trail	21A04	2200	3/7	62	<u>22.0</u>	8.0	13.0
Beaver Pass	21A01	3680	3/7	135	<u>45.5</u>	16.7	28.3

April 1

OKANOGAN RIVER

New Copper Mountain	46A-Can	4300	<u>3/27</u>	<u>21</u>	<u>6.4</u>	3.8	5.3*
---------------------	---------	------	-------------	-----------	------------	-----	------

YAKIMA RIVER

Green Lake	21C10	6000	4/2	120	<u>46.8</u>	23.0	36.2
------------	-------	------	-----	-----	-------------	------	------

AHTANUM CREEK

Green Lake	21C10	6000	4/2	120	<u>46.8</u>	23.0	36.2
------------	-------	------	-----	-----	-------------	------	------

BAKER RIVER

Dock Butte	21A11A	3800	<u>3/18</u>	246	103.0	-	74.3
Easy Pass	21A07A	5200	<u>3/18</u>	272	101.0	-	79.1
Jasper Pass	21A06A	5400	<u>3/18</u>	292	122.0	-	83.5
Marten Lake	21A09A	3600	<u>3/7</u>	264	100.0	<u>45.6</u>	<u>67.6</u>
			<u>3/18</u>	268	112.0	-	72.0
Mount Blum +	21A18a	5800	<u>3/18</u>	188	79.0	-	-
Rocky Creek	21A12A	2100	<u>3/18</u>	124	52.0	-	28.7
Schriebers Meadow	21A10A	3400	<u>3/18</u>	191	80.0	-	57.3
S. F. Thunder Creek	21A14A	2200	<u>3/18</u>	46	19.0	-	9.4
Watson Lakes	21A08A	4500	<u>3/18</u>	230	97.0	-	61.1

Average based on 1958-72 average

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 3
CORRECTIONS AND ADDITIONS - 1974 SNOW REPORTS

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average $\frac{1}{2}$

May 1

PEND OREILLE RIVER

Schweitzer Bowl	16A06	4500	4/30	87	42.2	<u>12.7</u>	26.6
-----------------	-------	------	------	----	------	-------------	------

YAKIMA RIVER

Olallie Meadows	21B02	3625	<u>4/17</u>	179	91.3	19.2	48.4
			<u>4/29</u>	173	<u>91.8</u>	18.2	48.6
White Pass (E. Side)	21C28	4500	4/29	<u>96</u>	<u>45.3</u>	-	25.9

LEWIS RIVER

White Pass (E. Side)	21C28	4500	4/29	<u>96</u>	45.3	-	25.9
----------------------	-------	------	------	-----------	------	---	------

GREEN RIVER

Cougar Mountain SP	21B42SP	3200	4/29	52	<u>26.0</u>	0.0	
Snowshoe Butte	21B43SP	5000	4/8	194	<u>89.2</u>	<u>38.2</u>	

BAKER RIVER

Baker Pass	21A27a	4900	<u>5/4</u>	<u>288</u>	<u>135.0</u>	<u>70.2</u>	
Mt. Blum	21A18a	5800	<u>5/4</u>	<u>206</u>	<u>97.0</u>	<u>63.9</u>	
Panorama New	21A26	4300	Delete **				

NOOKSACK RIVER

Panorama New	21A26	4300	Delete **				
--------------	-------	------	-----------	--	--	--	--

ELWHA

Hurricane	23B03	4500	5/4	77	<u>31.1</u>	13.8	26.9
-----------	-------	------	-----	----	-------------	------	------

$\frac{1}{2}$ Average based on 1958-72 average

APPENDIX 4
SNOW DATA TO JUNE 1, 1974

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #

U P P E R C O L U M B I A D R A I N A G E

PEND OREILLE RIVER

Baree Creek	15B11	5500	5/16	132	65.4	22.0	42.6
Baree Midway	15B16	4600	5/16	85	43.2	8.0	24.5
Baree Trail	15B15	3800	5/16	0	0.0	0.0	0.0
Heart Lake Trail	14C10	4800	5/16	53	24.6	0.0	10.2
			5/31	24	11.9	-	1.7
Hoodoo Basin	15C10	6000	5/16	156	76.2	29.1	48.8
			5/31	116	62.6	15.8	34.9
Hoodoo Creek	15C01	5900	5/16	147	72.3	28.0	45.5
			5/31	119	63.6	15.0	33.5
Lookout	15B02	5250	5/31	72	34.2	0.0	-
Nelson	19-Can	3050	5/13	7	2.9	0.0	0.8*
			5/30	0	0.0	0.0	0.0*
Schweitzer Bowl	16A06	4500	5/31	43	21.3	0.0	-
Schweitzer Ridge	16A05	6100	5/31	120	58.8	19.2	-

KETTLE RIVER

Big White Mountain	154-Can	5500	5/14	63	29.6	13.6	17.8*
			5/30	52	25.9	3.2	8.8*
Carmi	126-Can	4100	5/14	0	0.0	0.0	0.0*
Farron # 1	17-Can	4000	5/13	16	6.6	-	-
Graystoke Lake	5-Can	5950	5/15	76	29.2	16.8	21.1*
			6/1	Not Measured		8.2	15.4*
Monashee Pass	48A-Can	4500	5/14	29	12.1	5.4	9.4*
			5/31	17	7.5	0.0	2.0*
Old Glory Mountain	42-Can	7000	5/12	98	48.1	25.9	29.1*
			6/2	83	46.1	14.0	17.3*
Trapping Creek Lower	166-Can	3050	5/14	0	0.0	0.0	0.0*
Trapping Creek Upper	165-Can	4450	5/14	5	1.1	0.0	0.5*

SPOKANE RIVER

Granite Peak	15B13A	6000	6/4	105	45.0	10.1	-
Lookout	15B02	5250	5/31	72	34.2	0.0	-
Lost Lake	15B14A	6000	6/4	194	83.6	13.1	-
Medicine Ridge	15B04A	6150	6/4	118	52.6	10.6	-

OKANOGAN RIVER

Aberdeen Lake	6A-Can	4300	5/15	0	0.0	-	0.1*
Blackwall Peak	100-Can	6250	5/16	105	50.2	24.5	37.6*
			5/29	91	49.2	12.4	29.1*
Bouleau Lake	234-Can	4580	6/1	Not Measured		0.0	1.5*

Average based on 1958-72 average

* Average for years of record

APPENDIX 5
SNOW DATA TO JUNE 1, 1974

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
<u>OKANOGAN RIVER (Cont.)</u>							
Brenda Mine	193-Can	4800	5/14	12	5.1	0.0	2.9*
			5/27	0	0.0	0.0	0.0*
Brookmere	27-Can	3200	5/15	2	0.6	0.0	2.9*
Enderby	130-Can	6250	5/13	142	59.0	41.3	45.2*
			5/31	130	56.0	31.6	40.0*
Esperon Creek Lower	164-Can	4400	5/14	19	7.5	-	2.5*
			5/30	5	2.4	-	0.0*
Esperon Creek Middle	163-Can	4700	5/14	31	13.2	-	4.9*
			5/30	10	4.5	-	0.0*
Esperon Creek Upper	162-Can	5400	5/14	59	24.6	-	9.8*
			5/30	39	19.3	-	5.9*
Graystoke Lake	5-Can	5950	5/16	76	29.2	16.8	21.1*
			6/1	Not Measured		8.2	15.4*
Hamilton Hill	107-Can	4900	5/14	27	10.7	0.0	6.5*
			5/29	0	0.0	0.0	2.0*
Isintok Lake	152-Can	5510	5/11	26	10.2	3.8	4.8*
			5/29	17	7.0	-	-
Lost Horse Mountain	105-Can	6300	5/16	45	15.6	4.4	10.3*
			6/1	Not Measured		-	4.2*
McCulloch	4-Can	4200	5/14	1	0.2	0.0	0.6*
Missezula Mountain	106-Can	5100	5/13	22	7.2	0.0	1.9*
			5/28	0	0.0	0.0	0.0*
Mission Creek	5A-Can	6000	5/15	81	30.9	17.2	19.1*
			5/29	62	29.4	8.8	11.4*
Monashee Pass	48A-Can	4500	5/14	29	12.1	5.4	9.4*
			5/31	17	7.5	0.0	2.0*
Mount Kobau	156-Can	5950	5/15	46	20.2	4.2	10.0*
			5/30	38	19.2	0.0	2.0*
New Penticton Res. #2	183-Can	5225	5/15	33	10.0	2.0	7.3*
			5/31	16	6.1	0.0	0.0*
Nickel Plate Mtn.	47-Can	6200	5/14	39	13.5	-	7.3*
Postill Lake	55-Can	4500	5/14	13	4.1	-	4.6*
Quartette Lake			6/1	Not Measured			
Silver Star Mountain	99-Can	6050	5/12	84	41.4	23.4	26.0*
			6/1	72	38.6	12.5	15.5*
Summerland Reservoir	3A-Can	4200	5/12	7	2.9	0.0	2.3*
			5/29	0	0.0	-	-
Trout Creek	3-Can	4700	5/12	13	4.4	0.0	1.7*
Vaseux Creek	233-Can	4600	5/14	4	0.8	0.0	0.5*
White Rocks Mountain	70-Can	6000	5/14	82	37.8	15.9	20.8*
			5/30	64	33.4	2.8	-

Average based on 1958-72 average

* Average for years of record

APPENDIX 6
SNOW DATA TO JUNE 1, 1974

SNOW

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average $\frac{1}{2}$
<u>ENTIAT RIVER</u>							
Entiat Meadows +	20A33a	4800	5/15	Not Measured	15.0	-	-
			5/29	84	46.6	-	-
Four Mile Ridge +	20B27a	7000	5/15	Not Measured	12.0	-	-
			5/29	80	44.4	-	-
Fox Camp +	20A36a	6510	5/15	Not Measured	32.0	-	-
			5/29	152	84.4	-	-
Blue Creek G. S.	20B28a	5425	5/15	Not Measured	14.0	-	-
			5/29	84	46.6	-	-
Pope Ridge	20B20	4300	5/15	Not Measured	-	-	1.4
Pugh Ridge +	20A32a	6400	5/15	Not Measured	17.0	-	30.4
			5/29	93	51.6	-	-
Shady Pass	20A37	6200	5/15	Not Measured	-	-	-
			5/30	59	32.7	-	-
Snow Brushy +	20A35a	3850	5/15	Not Measured	0.0	-	19.9
			5/29	45	25.0	-	-
Tommy Creek +	20B21a	5300	5/15	Not Measured	0.0	-	3.7
			5/29	28	15.5	-	-
<u>WENATCHEE RIVER</u>							
Stevens Pass	21B01	4070	5/15	157	77.2	25.1	48.3
			5/29	132	70.1	9.4	36.5
Stevens Pass Sand Shed	21B45	3700	5/15	110	53.4	4.3	-
			5/29	80	40.8	0.0	-
<u>YAKIMA RIVER</u>							
Bumping Lake	21C08	3450	5/15	24	9.8	-	1.8
			5/30	0	0.0	-	-
Bumping Lake New	21C36	3400	5/15	36	17.6	-	-
			5/30	0	0.0	-	-
Joe Lake +	21B46a	4624	5/31	Marker Not Visible		-	-
Lake Cle Elum	21B14M	2200	5/15	0	0.0	-	-
Lemah Creek +	21B47a	3327	5/31	99	51.8	-	-
Stampede Pass SP	21B10	3860	5/16	149	68.6	10.4	-
			5/30	114	70.4	0.0	-
Tunnel Avenue	21B08	2450	5/15	41	17.9	-	7.9
			5/31	11	5.7	-	-
Van Epps Pass +	20B26a	5925	5/31	128	65.5	-	-
Waptus Lake +	21B49a	3024	5/31	51	26.7	-	-
White Pass (E. Side)	21C28	4500	5/16	84	38.1	-	21.2
			5/30	66	34.6	-	13.6
Olallie Meadows	21B02	3625	5/31	179	84.4	-	-
Snowshoe Butte SP	21B43SP	5000	5/31	182	96.0	-	-

Average based on 1958-72 average

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 7
SNOW DATA TO JUNE 1, 1974

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average $\frac{1}{2}$
<u>COWLITZ RIVER</u>							
White Pass (E. Side)	21C28	4500	5/16	84	38.1	-	21.2
			5/30	66	34.6	-	13.6
<u>GREEN RIVER</u>							
Stampede Pass SP	21B10	3860	5/16	149	68.6	10.4	33.6
			5/30	114	70.4	0.0	18.8
<u>SKYKOMISH RIVER</u>							
Stevens Pass	21B01	4070	5/15	157	77.2	25.1	48.3
			5/29	132	70.1	9.4	36.5
Stevens Pass Sand Shed	21B45	3700	5/15	110	53.4	4.3	-
			5/29	80	40.8	0.0	-
<u>BAKER RIVER</u>							
Baker Pass +	21A27a	4900	5/17	290	159.0	-	-
Dock Butte	21A11A	3800	5/17	200	110.0	44.0	72.7
			6/1	Late Report		34.0	58.0
Easy Pass	21A07A	5200	5/17	256	141.0	63.0	90.2
			6/1	Late Report		55.0	73.6
Jasper Pass	21A06A	5400	5/17	283	155.0	67.0	114.7
			6/1	Late Report		63.0	84.2
Komo Kulshan	21A17	800	6/1	Late Report		-	-
Marten Lake	21A09A	3600	5/17	241	132.0	55.0	81.3
			6/1	Late Report		40.0	66.2
Mount Blum +	21A18a	5800	5/17	212	116.0	63.0	-
			6/1	Late Report		65.0	-
Rocky Creek	21A12A	2100	5/17	56	31.0	0.0	12.1
			6/1	Late Report		0.0	-
Schreibers Meadow	21A10A	3400	5/17	176	97.0	39.0	61.7
			6/1	Late Report		13.0	48.6
S. F. Thunder Creek	21A14A	2200	5/17	0	0.0	0.0	0.0
			6/1	Late Report		0.0	-
Watson Lakes	21A08A	4500	5/17	196	108.0	-	73.5
			6/1	Late Report		36.0	61.4

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROOM 360, U.S. COURT HOUSE
SPOKANE, WASHINGTON 99201

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR-101



FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*